

Inventor: Daniel S. Sem
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in original claims 15-19 and on page 11, lines 6-13, which indicates that a receptor can be an enzyme; on page 8, lines 29-31, and page 13, line 32, to page 14, line 2, which indicates that a common ligand binds to a conserved site and that a conserved site of an enzyme is a site that binds a cofactor; on page 13, line 32, to page 14, line 2, page 15, lines 1-13, and page 31, lines 23-33, which indicates that a common ligand can be a cofactor or mimic thereof and that a specificity site can be a substrate binding site. Further support for new claim 47 can be found, for example, on page 10, line 32, to page 11, line 13; and page 12, line 31, to page 13, line 23, which indicates that a receptor family is two or more receptors, that a receptor can be an enzyme, and that an enzyme family binds the same cofactor (natural common ligand). Further support for new claim 57 can be found, for example, on page 32, lines 26-30, which indicates that a common ligand that binds to a conserved site competes for cofactor (natural common ligand) binding. Accordingly, these new claims do not raise an issue of new matter and entry thereof is respectfully requested.

Regarding the assertion in the Communication that the response mailed on September 25, 2002, is considered to be non-responsive, the Communication alleges that the remaining claims are not readable on the elected and previously examined invention. The Communication indicates that the claims previously under examination recited a "common ligand to a conserved site in a receptor family" but that nothing was present in the previously examined claims with respect to competitive binding.

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Applicant respectfully disagrees with the assertion in paragraph 3 of the Communication that the recitation of the phrase "wherein said common ligand competes for cofactor binding" would require a completely different search due to different classification and/or divergent subject matter of such a "common ligand" and that there would be no expectation that the searches would be coextensive. The specification teaches that a common ligand refers to a ligand that binds to a conserved site in a receptor family (page 8, lines 29-31). The specification also teaches that a conserved site of an enzyme is a site that binds a cofactor (page 13, line 32, to page 14, line 2). The specification additionally teaches that a common ligand that binds to a conserved site can be determined by competition with a cofactor (natural common ligand) (page 13, line 32, to page 14, ~~line 2~~ line 2; page 32, lines 26-30). Furthermore, the specification teaches that competing for cofactor binding is in fact a method for identifying a common ligand (page 32, lines 26-32). The specification thus clearly teaches that a common ligand binds to a conserved site and can be identified by competing for cofactor binding. Therefore, the assertion in paragraph 4 of the Communication that the originally claimed "common ligand to a conserved site in a receptor family" was not intended to include common ligands that compete for cofactor binding is clearly not supported by the teachings in the specification. Applicant maintains that the examination of a claim reciting that the "common ligand competes for cofactor binding" is not an undue burden on the Examiner since the search of a claim reciting such a phrase would necessarily be encompassed by a search of a claim


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reciting a "common ligand to a conserved site in an enzyme family."

Applicant respectfully requests reconsideration of the Notice of Non-responsive Amendment set forth in the Communication and requests consideration of the amendment submitted in the previous response mailed September 25, 2002. Applicant further requests that the new claims added herewith be considered. The Examiner is invited to call the undersigned agent or Cathryn Campbell if there are any questions.

Respectfully submitted,

February 12, 2003
Date


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